

## PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT  
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P.VUB.16/WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/BE 03/00140	International filing date (day/month/year) 20.08.2003	Priority date (day/month/year) 22.08.2002
International Patent Classification (IPC) or both national classification and IPC H04B3/14		
Applicant VRIJE UNIVERSITEIT BRUSSEL et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I  Basis of the opinion
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 19.03.2004	Date of completion of this report 01.12.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Fax 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Amorotti, M Telephone No. +31 70 340-4105



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/BE 03/00140

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, Pages

1-13 as originally filed

### Claims, Numbers

1-10 as originally filed

### Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

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5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	6
	No: Claims	1-5, 7-10
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Reference is made to the following document:

D1: US-A-4 531 165 (SONU GENE H ET AL) 23 July 1985 (1985-07-23)

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1-5,7-10 is not new in the sense of Article 33(2) PCT.

2.1 The document D1 discloses (the references in parentheses applying to this document) an adaptive equalizer comprising:

an equalizer filter (**fg.3, block 16**) for filtering a distorted signal from a communication channel, having a data signal input (**IN in fg. 4**) for receiving said distorted signal, a feedback signal input (**from the counter 53 to the xDAC 50 in fg. 4**) for a feedback control signal, and which generates an output signal at an output node (**OUT in fg. 4**);  
circuitry (**blocks 54-60**) for processing said output signal and generating said feedback control signal, the circuitry comprising  
a first means (**57,59**) for measuring a short-term-amplitude signal of said output signal,  
a second means (**58,60**) for measuring a long-term-amplitude signal of said output signal,  
a comparator means (**56**) that compares said short-term-amplitude signal and said long-term-amplitude signal and that determines the evolution of said feedback control signal,  
arranged such that said distorted signal is compensated for its higher frequency attenuation in said communication channel.

In this claim and in the followings first and second means for measuring short- or long-term-amplitude signal has been interpreted by the examiner as respectively highpass or lowpass filtering means, as stated in the description on pg. 7, lns. 25-32.

Therefore claim 1 is not new.

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- 2.2 For the same reason, independent claim 8 is also not new because the circuit depicted in fgs. 3 and 4 complies to the method stated in the above mentioned claim.
- 2.3 Dependent claims 2-5, 7,9,10 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty or inventive step, see document D1 and the corresponding passages cited in the search report.
3. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 6 does not involve an inventive step in the sense of Article 33(3) PCT.

In fact a man skilled in the art would normally choose the **limiting amplifier** of claim 6 to get an output signal compatible with the digital network following this circuit. Therefore claim 6 does not appear to be inventive.